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(54) **HIGH PERFORMANCE/LOW COST VIDEO GAME SYSTEM WITH MULTI-FUNCTIONAL PERIPHERAL PROCESSING SUBSYSTEM**

(75) Inventors: **Genyo Takeda; Shuhei Kato; Satoshi Nishiumi,** all of Kyoto (JP)

(73) Assignee: **Nintendo Co., Ltd.,** Kyoto (JP)

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Related U.S. Application Data

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Primary Examiner—Jessica J. Harrison
Assistant Examiner—Yveste G. Cherubin
(74) *Attorney, Agent, or Firm*—Nixon & Vanderhye P.C.

(57) **ABSTRACT**

A video game system includes a game cartridge which is pluggably attached to a main console having a main processor, a 3D graphics generating coprocessor, expandable main memory and player controllers. A multifunctional peripheral processing subsystem external to the game microprocessor and coprocessor is described which executes commands for handling player controller input/output to thereby lessen the processing burden on the graphics processing subsystem. The player controller processing subsystem is used for both controlling player controller input/output processing and for performing game authenticating security checks continuously during game play. The peripheral interface includes a micro-processor for controlling various peripheral interface functions, a read/write random access memory, a boot ROM, a coprocessor command channel interface, a player controller channel interface, etc., which components interact to efficiently process player controller commands while also performing other important functions without requiring significant main processor processing time.

21 Claims, 20 Drawing Sheets